Amendments to the Drawings:

The attached drawing sheet containing Fig. 1 replaces the original drawing sheet containing Fig. 1.

REMARKS

Claims 1-12 are currently pending in the application. By this amendment, claims 1, 4-6, 8 and 10-12 are amended. The foregoing separate sheets marked as "Listing of Claims" show all the claims in the application, with an indication of the current status of each.

Fig. 1 has been amended to correct a spelling error in the label for item 12, replacing "CHATACTERISTIC" with "CHARACTERISTIC".

The Examiner's indication that claims 2-4, 8 and 9 contain allowable subject matter is acknowledged with appreciation.

The Examiner has objected to claims 1, 4-6, 8 and 10-12 because of certain informalities. These informalities are corrected by the foregoing amendments.

The Examiner has rejected independent claims 1, 5 and 6 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Publication No. 2002/0191578 to Bachl et al ("Bachl"). Both Bachl and the present invention are concerned with using Transport Format Combination Indicator (TFCI) data for error correction in a 3rd Generation Partnership Project (3GPP) system. Bachl discloses a technique for improving pilot based channel estimation (page 2, ¶0018) by using coded control symbols as additional pilot symbols, thereby also reducing the energy required for transmission (page 2, ¶0019). In the preferred embodiment, the coded control symbols comprise TFCI data (page 2, ¶0020).

Bachl describes pilot based techniques as using blocks of data symbols known a priori by the receiver (page 1, ¶0005), where channel estimation is improved if there is a larger ratio of pilot symbols to non-pilot symbols in the transmission (page 1, ¶0006). However, the 3GPP standard fixes the number of pilots bits, which means that transmission power must be increased to compensate, although this increase reduces overall system capacity (page 1, ¶0007). Against the background of this prior art Bachl proposes using coded control signals from the TFCI data as additional pilot

symbols. This is accomplished by re-encoding the TFCI at the receiver as a channel estimation unit (page 2, ¶0021) and applying this control channel estimate to the data channel (page 2, ¶0022).

By contrast, the present invention uses a different aspect of the TFCI information. As explained in the background section (page 2, lines 16-27), under the 3GPP prior art, control channel information and data channel information of a plurality of systems are spread and then modulated into a complex code $(I + jQ)$, where "I" represent the in-phase components and "Q" represents the quadrature phase components, where the control channel (including TFCI information) is assigned to "Q" and the data channel data are sequentially assigned to "I" and "Q" (page 8, line 18, to page 9, line 8). Instead of using a conventional decoding technique, the invention uses the quadrature correlation characteristics of the encoded TFCI information (page 9, lines 14-19) to perform data correction by feeding back the TFCI decoding characteristics (i.e. using the quadrature correlation characteristics) to the data channel (page 9, lines 20-25). The details of the technique are shown in Fig. 1, where the output of the TFCI decoding characteristic feedback section 12 is a correction value which feeds the data correcting section 1 applied to the data in the data channel. It will be noted that a symbol data determining section 8 separates the TFCI code from the pilot symbol (within each slot within a frame, as further described in connection with Fig. 4).

From this description it will be clear that while both Bachl and the present invention use the TFCI, the resulting techniques are quite different. The Examiner recognizes the difference by indicating that claims 2 and 8 (and their dependent claims) contain allowable subject matter. However, the proper scope for the claimed invention will be found by an amendment to independent claims 1, 5, and 6 which further refines the "TFCI decoding characteristic feedback" to more particularly express the use of quadrature correlation characteristics, as described above.

Consequently, claims 1, 5 and 6, as amended, and their dependent claims, are now believed to be in allowable form.

The Examiner has rejected claim 7 under 35 U.S.C. §103(a) as being unpatentable over Bachl in view of U.S. Patent Publication No. 2002/0013926 to Kim et al. ("Kim"). Since claim 7 depends from claim 6, which is now believed to be in allowable form, it is also believed that this ground of rejection is overcome.

The Examiner has rejected claims 10-12 under 35 U.S.C. §103(a) as being unpatentable over Bachl in view of U.S. Patent Publication No. 2002/0115443 to Freiberg et al. ("Freiberg"). Since claims 10 and 12 depend from claims now believed to be in allowable form, it is believed that this ground of rejection is also overcome as to claims 10 and 12. Further, independent claim 11 has been amended in the same manner as described above with regard to claims 1, 5 and 6. Since the rejection of claim 11 relies upon Bachl in this particular, and since Freiberg does not address this issue, it is believed that this ground of rejection is also overcome as to claim 11.

In view of the foregoing, it is requested that the application be reconsidered, that claims 1-12 be allowed, and that the application be passed to issue.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at 703-787-9400 (fax: 703-787-7557; email: clyde@wcc-ip.com) to discuss any other changes deemed necessary in a telephonic or personal interview.

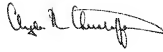If an extension of time is required for this response to be considered as being timely filed, a conditional petition is hereby made for such extension of time. Please charge any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041.

Sincerely,

Clyde R Christofferson
Reg. No. 34,138

Whitham, Curtis, Christofferson & Cook, P.C.   **Customer No. 30743**
11491 Sunset Hills Road, Suite 340
Reston, VA 20190
703-787-9400
703-787-7557 (fax)